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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,526	01/03/2001	Eisuke Sasaoka	50395-073	9992

7590

07/02/2002

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EXAMINER

TRA, TUYEN Q

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 07/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/752,526

Applicant(s)

SASAKA ET AL.

Examiner

Tuyen Q Tra

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6 and 9 is/are rejected.
- 7) ☒ Claim(s) 4 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The declaration filed 01/03/01 is acceptable.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d).

Drawings

3. The drawings in this application are objected to by the Draftsperson as for the reasons noted on the attached Notice of Draftsperson's Patent Drawing Review, form PTO-948.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 5 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter "effective area" which applicant regards as the invention.

Claims 5 and 9 state a term "effective area" which is need a further explanation in specification. What is "effective area"? Which drawings is the "effective area" referred to?

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application

being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Kinoshita (U.S. Pat. 6,342,965 B1).

a) With respect to claim 1, Kinoshita discloses an optical fiber amplifier in Fig. 6 comprising of an optical fiber (61) for Raman amplification and a pump light introducing means (63), the optical fiber transmitting signal light from input and Raman-amplifying the signal light by pump light introduced therein, the pump light introducing means (63) introducing, as the pump light, light having a wavelength that is within the amplification wavelength band of an Er-doped optical fiber amplifier into the optical fiber for Raman amplification (col. 9, lines 21-34; col. 21, lines 23-46).

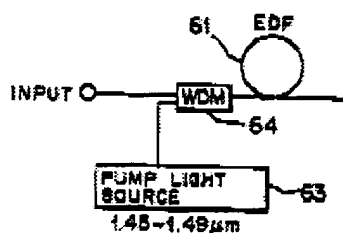


Figure 6

b) With respect to claim 3, Kinoshita further states in col. 8, lines 22-34 that a pump source for supplying pump light for pumping the rare earth doped fiber optical amplification element which, in other word, means the pump light introducing means (63) is provided with an Er-doped optical fiber amplifier which amplifies the pump light and introduces the amplified pump light into the optical fiber for Raman amplification (Fig. 6).

8. Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Akasaka et al. (U.S. Pat. 6,292,288 B1).

Akasaka et al. discloses a Raman amplifier in Figure 1 comprising of a Raman amplifier in a repeater (6) section thereof, the Raman amplifier being equipped with

- an optical fiber (2) for Raman-amplification which transmits signal light and Raman-amplifies the signal light by means of pump light introduced thereinto, and

- a means (1) of introducing the pump light having wavelength within the amplification wavelength band of an Er-doped optical fiber amplifier into the optical fiber (2) for Raman amplification, and the optical fiber for Raman amplification constituting a part or the whole of the optical transmission line of the repeater (6) section (col. 4, lines 31-40; col. 6, lines 34-42).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita (U.S. Pat. 6,342,965 B1), as applied to claim 1 above, in view of Watanabe (U.S. Patent No. 5,798,853A).

Kinoshita discloses an optical fiber amplifier in Fig. 6 comprising of an optical fiber (61) for Raman amplification and a pump light introducing means (63). However, Kinoshita does

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disclose the wavelength of the pump light is 1535 nm to 1605 nm. Within the same field of endeavor, Watanabe teaches an optical communication system device wherein the wavelength of the pump light is 1549 nm (col. 14, lines 32-34).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct the optical fiber amplifier with pump light such as disclosed by Kinoshita, with the wavelength of the pump light is 1549 nm such as disclosed by Watanabe, for purpose of lowering loss in optical transmissivity.

Allowable Subject Matter

11. Claims 8 is allowed.

The reason for the indication of allowable subject matter is that (claim 8) An optical fiber having an absolute value of chromatic dispersion in the range of about 0.1 to 10ps/nm/km at 1.65 μ m wavelength disclosed in the claims is not found in the prior art.

12. Claims 4 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The reason for the indication of allowable subject matter is that (claim 4) an optical fiber having an absolute value of chromatic dispersion in the range of about 0.1 to 10ps/nm/km at 1.65 μ m wavelength; (claim 7) wherein the optical transmission line is further provided with a dispersion compensating fiber, the chromatic dispersion of the optical fiber for Raman amplification having a sign opposite to that of the chromatic dispersion of the dispersion compensating optical fiber, the dispersion slope of the optical fiber for Raman amplification

having a sign opposite to that of the dispersion slope of the dispersion compensating optical fiber disclosed in the claims is not found in the prior art.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (703) 306-5712. The examiner can normally be reached on Monday to Friday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (703) 308-4883. The fax number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Examiner: Tuyen Tra

Date: June 14, 2002


Hung Xuan Dang
Primary Examiner